



Costa Mesa Sanitary District

Organics Recycling Program



Agenda

1. Who we are
2. Organics Recycling Program existence at CMSD
3. Length of time to establish the program
4. The mandatory and voluntary elements of the program
5. The planning process
6. The challenges
7. Addressing contamination issues
8. Type of education needed for the program
9. How to ensure participation

Who we are

- Formed in 1944
- Independent special district
- Core services
 - Wastewater and solid waste collection services
- Service area
 - City of Costa Mesa and portion of City of Newport Beach and County of Orange
- Population: 116,700
- Personnel: 22 staff members
- Annual Budget: \$11.5 million



Last Week Tonight with John Oliver: Special Districts (HBO)

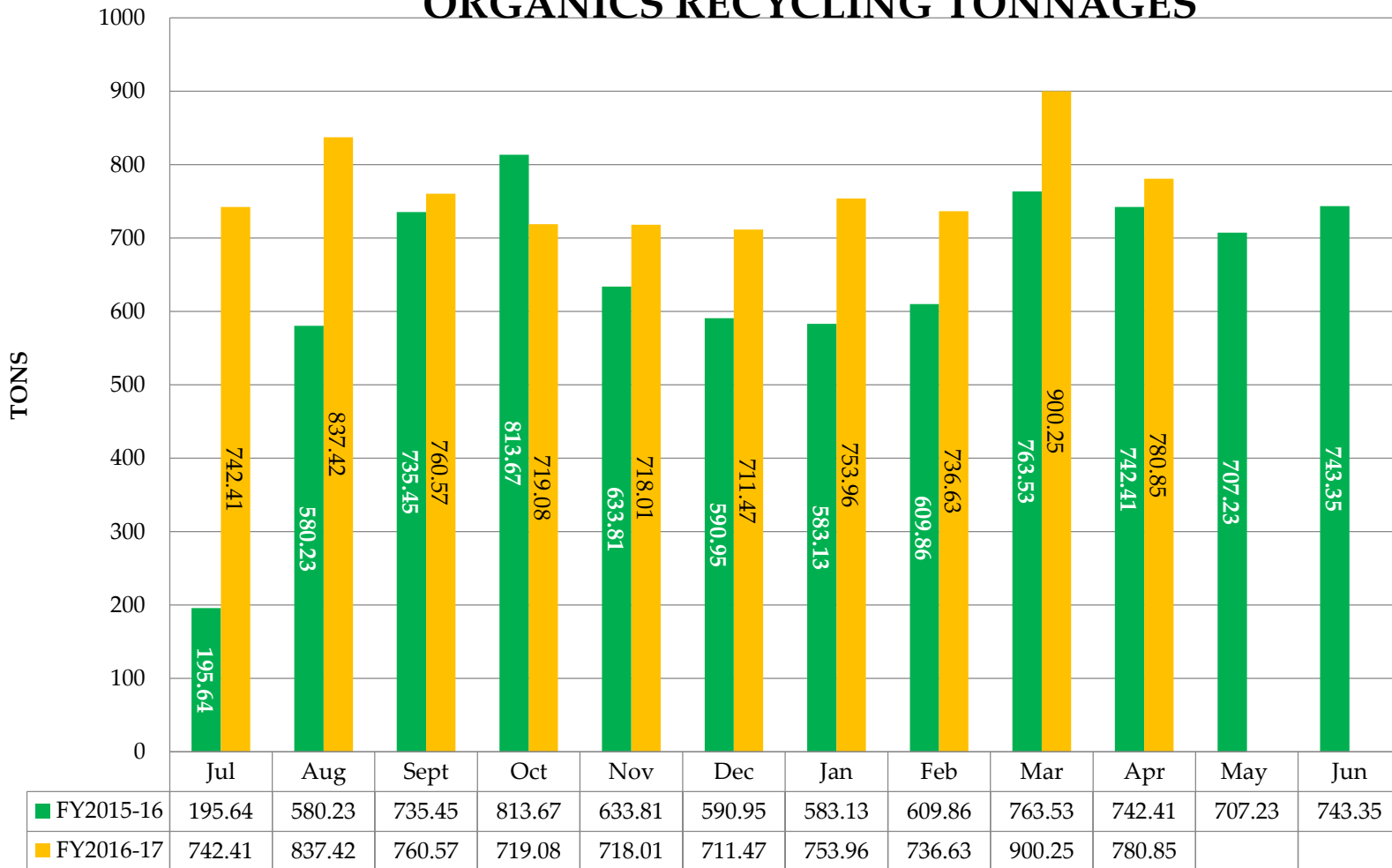


Organics Recycling Program Existence at CMSD

- Planning began in 2011
- First organic carts delivered in July 2015
- Full implementation in September 2016

Organics Recycling Program Existence at CMSD

ORGANICS RECYCLING TONNAGES



15,360 tons

Length of Time to Establish Program

Timeline

- 2011 – CMSD Board of Directors began formulating Zero Waste Plan
- 2012 – Community Survey
- 2013 – Discussion with CR&R regarding anaerobic digestion facility in the City of Perris
- 2013-14 – Four town hall meetings
- 2014 – CMSD Board of Directors approved the Organics Recycling Program on February 25th.
- 2014-15 – Public awareness
- 2015 – First organic carts delivered to residents in July

Mandatory & Voluntary Elements

Source Separation



Mandatory & Voluntary Elements

Mixed Waste Collection System – CMSD Achieved 54% Diversion



Mandatory & Voluntary Elements

Organics Recycling Program

- Each household unit can receive two 64 gallon organic carts
 - Three or more organic carts are charged \$8.00 a cart per month
- Requires separating green waste and food scraps
 - Will accept FOG and pet waste
 - Odor control – compostable bags or newspaper
- Free kitchen pail
 - Given away 2,629



Mandatory & Voluntary Elements

Organics Recycling Program

- **Not a mandatory program**
- Residents can voluntarily request exemption if:
 1. Household that generate no green waste
 - A. Replace organic cart with 32 gallon food waste cart
 - B. Exempt from the program and keep both existing mixed waste carts.
 2. Household that generates neither food scraps or green waste.
 - A. Exempt from the program and keep both existing mixed waste carts.
 3. Households with limited storage space for organic carts
- To date total exemptions: 2,834 or 12.79% of all residential units

Planning Process

Certainties:

1. Changing behavior (mixed waste to semi source separating)
2. AD technology expensive – Rates will go up!

Planning Process

2012 Community Survey - Wanted to engage with residents their opinion on the environment and solid waste collection services.

- Wanted a statistically valid sample size.
- Surveyed 1,000 residents, via telephone.
- Do you want to divert more waste away from landfills?
- Are you willing to pay more?

Planning Process

SURVEY RESULTS

- 81.6% support increasing CMSD's diversion from 54% to 75%
- 82.2% support reducing the amount of trash that goes to the landfills from 16,000 tons/year to 12,500 tons/year
- Reasons why support reducing the amount of trash that goes to the landfills
 - Environment 41.6%
 - Efficiency 30.5%
 - Saves space 25.8%

Planning Process

SURVEY RESULTS

- Would you be willing to pay more for trash services if you knew that the District could reduce the amount of trash that eventually goes to landfills to less than 20% of trash collected by implementing the CMSD proposal?
 - Yes 41.4%
 - No 37.1%
 - Unsure/Refused 21.5%
- How much more would you be willing to pay?
 - \$1 - \$5 per month – 72.9%

Planning Process

- CMSD Board of Directors set a goal of 75% diversion
- Two options:
 1. Composting
 2. Anaerobic Digestion

Planning Process

Composting

- 100% nutrient recovery
- 0% energy recovery
- 0% emissions recovery
- Diverts organics away from landfills
- Closest composting facility accepting food waste – 92 miles in the City of Victorville
- Competitive cost

Anaerobic Digestion

- 100% nutrient recovery
- 100% energy recovery
- 100% emissions recovery
- Diverts organics away from landfills
- Reduces greenhouse gas emissions
- Produces renewable zero carbon bio-fuel for use of CR&R's fleet
- 61 miles away from CMSD
- More expensive than composting

Planning Process

CMSD Mission:

“Protecting our community’s health and the environment by providing solid waste and sewer collection services.”

CMSD Zero Waste Goal

“Achieve 75% diversion by 2020”



Planning Process

- Negotiated with CR&R for anaerobic digestion
- Took the deal points on the road
 - Four town hall meetings
 - CR&R explained the AD technology
 - CMSD described the “what,” “why,” and “how”
 - Video taped town hall meetings for CMSD website
 - Created a “How-to” video
 - Created a map showing when and where organic carts are delivered
 - Newsletters, flyers, blogs, newspaper stories
- February 25, 2014, CMSD Board of Directors adopted the Organics Recycling Program



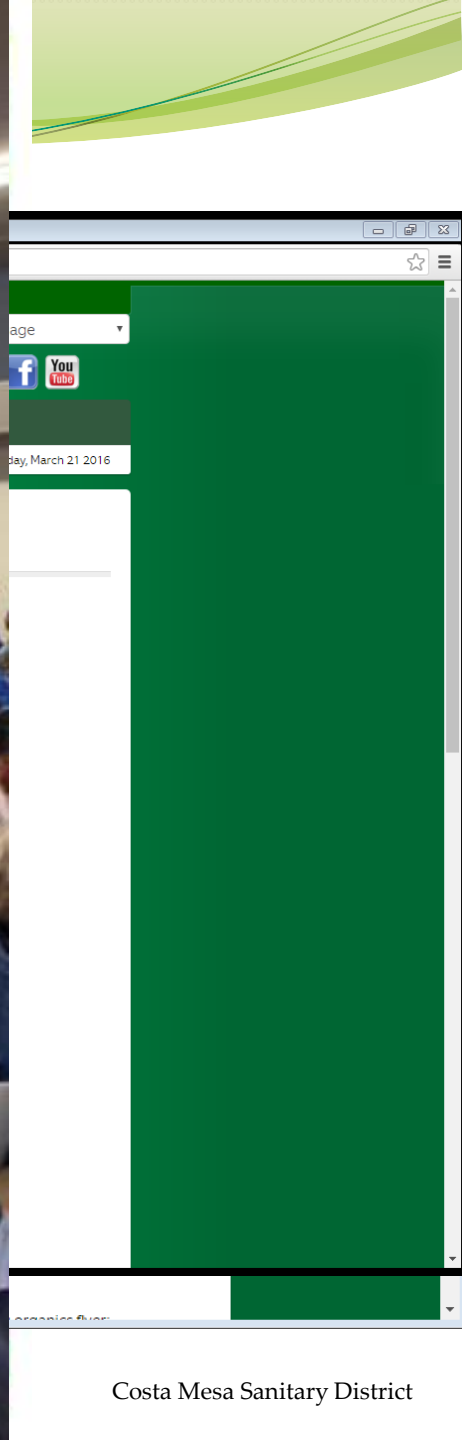
Challenges

- Non-English speaking residents participation

Contamination Issues

- No trash cops!
- If organic carts used strictly for trash disposal
 - Code Enforcement
 - Warning letter
 - Exempt from program

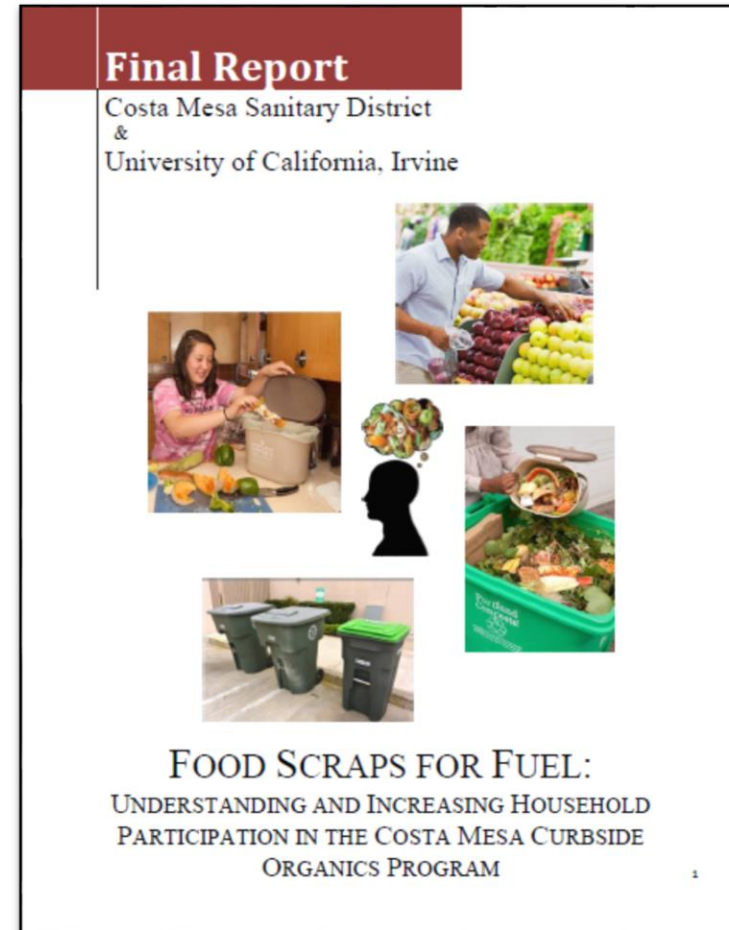




Ensuring Participation

Organics Recycling Behavioral Study

- Study performed by University California, Irvine
- First to incorporate social science into organic waste management policy
 - 1st to test communicating social norms to increase food scrap separation
- 352 residents participated in an eight week experiment.



Ensuring Participation

- The experiment sought to answer two questions:
 1. How are households responding to CMSD's Organics Recycling Program?
 2. Do simple norm communication tools increase food scrap separation?

Ensuring Participation

FINDINGS

- 30% of participants used repurposed containers to separate their food waste (e.g. baby formula containers, canisters, milk cartons).
- When participants were given a kitchen pail the separation increased to 45%



More likely
to separate
food waste if
have a
kitchen pail

Ensuring Participation

FINDINGS

- 66% of participants separated their food scraps.
- Communicating behavior of others increased participation by 11%
 - 77% of participants separated their food scraps

76%

**of Households in
Costa Mesa**
Separated All their
Food Scraps
this week

Thanks for partnering with the
Food Works Lab at the
University of California, Irvine,
the Costa Mesa Sanitary District
& the Community.

Together, we're
**keeping organics out of landfills
& providing clean fuel for
collection trucks**

Ensuring Participation

- Encourage residents to pick up kitchen pail.
 - Special events
 - Newsletter
- Inform residents of participation ratio
- Show how organics are being converted to RNG to:
 - Fuel refuse trucks
 - Reduce greenhouse gas
 - Benefit the environment

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